CS 2336-Fall 2013
Computer Science II

Introduction
Welcome to CS 2336. The course covers exceptions and number formatting. File input/output using Stream classes. Implementation of primitive data structures, including linked lists (all types), stacks, queues, and binary trees. Advanced data manipulation using core classes. Introduction to multi threading, multimedia, and networking. Includes a comprehensive programming project

Instructor Contact Information
Kamran Z. Khan
Office: ECSS 4.611
Phone: (214) 280-7124
kkhan@utdallas.edu
Office Hours: Wednesday 2:00-4:00pm. Time may change weekly – email me!

TA Contact Information
TBD

Course Information
Lecture:

Section 501: Monday/Wednesday: 5:30pm – 6:45pm, ECSS 2.415

For further information, assignments and assignment submission see http://elearning.utdallas.edu (Blackboard)

Textbook
Introduction to Java Programming, Comprehensive Version (9th Edition)
Prentice Hall 9th Edition 2013

INTRODUCTION TO JAVA PROGRAMMING, COMPREHENSIVE VERSION, 9/E
PRSED 9th Edition 2013

Course Work and Grading

The final course grade in CS 2336 will be based upon performance on various assignments such as exams, quizzes and programming assignments. Additionally, your attendance and active participation in lecture will be reflected in your final grade. The percentage break-down is as follows:

Assignment	Percentage
Exams	45.00%
Project	20.00%
Assignments	20.00%
Final Exam	15.00%

It is expected that each student will keep up with the reading as outlined on the course web site. Additional materials may be referenced in class as needed. Assignments and due dates will be available on Blackboard. Final grades in this course are determined as follows:

93 - 100 A	80 - 82 B-	67 - 69 D+
90 - 92 A-	77 - 79 C+	63 - 66 D
87 - 89 B+	73 - 76 C	60 - 62 D-
83 - 86 B	70 - 72 C-	00 - 59 F

Prerequisite: CE/CS/TE 1337
Prerequisite or Corequisite: CE/CS/TE 2305. (Same as CE/TE 2336) (3-0) S

Programming Assignments and Labs

There will be 4 programming assignments during the semester. Assignments will be posted in eLearning and should be turned in via **eLearning** ONLY. **No e-mail submissions are accepted**. **No late submissions are accepted.**

Submissions should contain:

1. A pseudocode or algorithm of your solution plan with explanatory documentation where you think necessary.
2. A text copy of all source code(s) (.java). PLEASE INCLUDE A COMMENT SECTION AT THE BEGINNING OF YOUR CODE WITH YOUR NAME, LASTNAME, SECTION NUMBER, AND DESCRIBE HOW TO RUN YOUR PROGRAM.
3. A text copy of your input(s) and displayed outputs of your code (.txt or .doc)
4. Copies of all executable (.class) files.

Assignments will be graded on a 100 point basis, utilizing the following criteria:

1. Source Code: (45%)

1.1 Program Design: 20%

Many times you can write code that fulfills the requirements by just writing a single **main()** method. But most times, the problem is complicated enough to require several steps, which may be repeated one or more times. Please design your programs so that the functionality is spread across multiple methods that each accomplish a particular task, and name the method according to the task it performs.

1.1.1. Partitioning: Is the required functionality spread logically across multiple methods (or classes)?
1.1.2. Organization: Is the overall program flow easy to follow? Is it easy for an outsider to figure out how your software works?
1.1.3. Efficiency: Do the individual methods accomplish their given tasks as efficiently as possible? Are unnecessary variables, loops, methods, and classes eliminated?
1.1.4. Coupling: Are methods (and classes) "loosely coupled"? Does each method only receive the data it needs in order to accomplish its task? Are the "public" methods and variables appropriately so? Is information as hidden as possible?

1.2. Comments: 10%

- Every file should have a header that includes your name, CS2336.nnn, & the homework number.
- Every class should have an extensive header comment explaining the purpose of the class.
- Every method should have comments explaining what it does, what its parameters are, and what values it returns.
- Significant variables and sections of code should have comments explaining their purpose. Avoid meaningless comments like "Declare the variables" or "This code adds one to the variable".

1.3. Coding Style: 15%

You should try to follow most of the coding standards for Java (see http://java.sun.com/docs/codeconv/), but these three are especially important:

1.3.1. Formatting: Is code properly indented to indicate blocks?
1.3.2. Naming: Is everything (significant variables, classes, methods) named logically and descriptively? (Not required for looping variables and throwaway variables.)
1.3.3. Capitalization:

- Package names are lowercase: java.io, java.net, etc.
- Class (and interface) names should be nouns, with the first letter of each internal word capitalized: Loan, AmortizationTable, Person, HashMap
- Method names should be verbs, with the first letter lowercase & the first letter of each internal word capitalized: run(), runFaster(), runForYourLife()

- Constants should be in all upper-case, with words separated by an underscore, e.g.: final int THIS_IS_A_CONSTANT = 1;

2. Execution: (45%)
This section has to do with how well your program runs. If your program does not compile, please be aware that you may get no credit in this section.

2.1. Program Execution: 15%

2.1.1. No crashes: Does the program actually run all the way through the simplest possible test case without crashing?

2.1.2. Error Detection & Recovery: **Does the program react well (does not crash) to unexpected or inconsistent events or input? Are exceptions handled appropriately?**

2.1.3. Efficiency: Does the program finish executing in a reasonable amount of time?

2.2. Specification: 30%
This is really the most important part: does your program do what it is supposed to do?

2.2.1. Nominal case: Does the software correctly fulfill the requirements of the assignment for the "expected" test cases?

2.2.2. Special cases: Does the software correctly handle unusual but legal test cases? Example: square root of a negative number, interest payment higher than loan payment

For assignments that seem arbitrarily restricted ("your program must save 4 runs","your program must accept up to 10 names"), points will be not taken off as long as your program meets at least those requirements. You may exceed them without penalty.

3. Documentation (10%)
All assignments must be submitted with supporting documentation. At a minimum, this should include an algorithm report and a UML class diagram if you have more than a few classes. You should describe the overall flow of your program at least at a high level. If there are any parts of the program that are unusually complex, you should specify those parts in detail, using pseudocode or a flowchart.

Project
There will be a term project that will be posted in eLearning and should be turned in via **eLearning** ONLY. **No e-mail submissions are accepted**. **No late submissions are accepted.** Students can form groups of max. 4 students for the project. Group work is strongly encouraged. Please choose your own team mates. Each group should clearly indicate the firstname and lastname of students in the group. Each group should designate a group member to submit its project via eLearning. ONE SUBMISSION PER GROUP IS SUFFICIENT. **Ideally, members of each group should receive the same grade.** To ensure fairness, peer evaluations will be collected to reflect good/poor performance within each group. So, the members of the same group MAY NOT get the same grade due to peer evaluations. Students should form their groups by the **Exam 1** date.
Each group should hand in a **one page document** describing the group members and the delegated tasks for each member to the professor on the **Exam 1** date during the exam.
The same grading policy that is used for the assignments applies to projects. Please see the "Assignments" category above to see the detailed grading policy.

Covered Topics and Class Outline

Session	Date	Lecture	Assignments
Week 1	8/26-28	Syllabus discussion, Review: Ch 8: Objects & Classes, Ch 10: Thinking in Objects	Read Ch 8, 10
Week 2	9/2-4	Review: Ch 11: Inheritance & Polymorphism, Ch 15: Abstract Classes & Interfaces	Read Ch 11, 15
Week 3	9/9-11	Review: Ch 12&17: GUI, Ch 16: Event-Driven Programming	Read Ch 12, 16, 17
Week 4	9/16-18	Ch 18: Applets & Multimedia	Read Ch 18
Week 5	9/23-25	Ch 14: Exception Handling & Text I/O, Ch 19: Binary I/O	Read Ch 14, 19
Week 6	9/30-10/2	Exam 1 review, **10/02 Exam 1*: 8, 10, 12, 14, 15, 16, 17, 18, 19**	
Week 7	10/7-9	Ch 20: Recursion Read Ch 20	Ch 20: Recursion Read Ch 20
Week 8	10/14-16	Ch 22: Lists, Stacks, Queues	Read Ch 22
Week 9	10/21-23	Ch 27: Binary Search Trees	Read Ch 27
Week 10	10/28-30	Exam 2 Review, **11/01 Exam 2*: Ch 20, 22, 27**	
Week 11	11/4-6	Ch 23: Sets & Maps	Read Ch 23
Week 12	11/11-13	Ch 32: Multithreading & Parallel Programming	Read Ch 32
	11/25-30	**FALL BREAK – No class**	
Week 14	12/2-4	Ch 33: Networking	Read Ch 33
Week 15	12/9	Project work	
Week 15	12/11	**12/11 Exam 3*: Ch 23, 32, 33**	**12/11: Project due**
		Final Exam	

Learning Outcomes

After successful completion of this course, you should be able to:

- Implement a comprehensive OO application
- Create and use primitive data structures
- Use core Java data structures – stack, queue
- Use core Java data structures – lists
- Use core Java data structures – maps
- Implement a GUI for user interaction
- Create and use exception handlers
- Create and use graphical error messages
- Use file input/output – text files
    - Use file input/output – object files

Attendance Policy

Because of the nature of this class, attendance of and participation in lecture is of the utmost importance. Therefore, students are expected to attend class regularly. If a student is absent from class, it is that students responsibility to make arrangements with the professor to make up any work missed or to ensure that assignments are submitted on time or early. Late assignments will not be accepted except in extreme instances. Any assignments that will be missed (including those due to university-sanctioned events) must be completed before the due date. This includes lecture exams and homework assignments.

Academic Ethics and Collaboration

You are expected to create, edit and print your own assignments and take tests without outside assistance. All work is expected to be your own. In particular:

- You should never give or receive solutions/answers to any questions or projects or any parts or questions or projects. This includes but is not limited to source code, design documents, homework, etc.
- On-line sources can be used as references, however submitting material found online as part of your own work is unacceptable.

If you collaborate on any assignment for any reason, you will receive a 0 on the particular assignment. In severe cases, you will receive an F in the course and may be brought in front of the UTD Honor Council. It is your responsibility to know and understand the University's Honor Code and the expectations for collaboration in this course. The instructor of this course reserves the right to impose less severe penalties as seen fit.

Students who copy the work of another on an exam, quiz, or lab assignment will receive a failing grade and be subject to UTD's honor council process. PLEASE DO NOT CHEAT.

Additional Information

Make-up Exams
A student can ONLY get a make up exam if it was missed due to an extreme emergency (proved by official documents), and arrangements are made BEFORE the exam date.

Extra Credit
No extra credit is offered.

Late Work
No late submission is accepted.

Field Trip Policies
Off-campus, out-of-state, and foreign instruction and activities are subject to statelaw and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school Dean. Below is a description of any travel and/or risk related activity associated with this course. No off-campus activities are scheduled.

Student Conduct and Discipline
The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year. The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity
The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work. Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Any student plagiarizing will fail the class with an "F" grade and WILL HAVE TO BE REPORTED TO the University of Texas at Dallas Dean of Students to initiate the academic dishonesty procedures as explained in "Student Discipline and Conduct - UTDSP5003" at http://policy.utdallas.edu/utdsp5003.

Email Use
To protect privacy of students, e-mail communication will not involve discussions of specific grade information. If you would like to discuss your grades, you can do so either in class, or during office hours.

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class
The administration of this institution has set deadlines for withdrawal of any collegelevel courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures
Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*. In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the deal will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grades
As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.

Disability Services
The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:
The University of Texas at Dallas, SU 22
PO Box 830688
Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, notetaking, or mobility assistance.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days
The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated. The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Off-Campus Instruction and Course Activities
Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean.

These descriptions and timelines are subject to change at the discretion of the Professor.